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DN 10/27/03

Miami Fl, October 7, 2003

Mr. Roger L. Pang,
Examiner
U.S. Patent and Trademark Office,
Alexandria. VA.

In response to the final Office Action Summary sent to us on July the 10th. 2003, in connection with the application No. 10/083,085 we are sending the amendments recommended by the examiner as well as legible copies of the information disclosure statement.

Formal drawings are jointed; limitations are included in the specification; the last two lines of the abstract are removed; claims were cancelled and now are resumed in one, taken into account the objections pointed out.

Pedro Quinones

Produced between the pump P and the turbine T, then the ring gear 5 becomes motionless and the torque from the engine is mechanically transmitted by means of the mechanical torque converter to the driving wheels at the gear transmission ratio given by the dimensions of the elements of said mechanical converter.

The transmission only requires of one planetary gear system because the hydraulic converter is moved by the engine itself, and not by an intermediate planetary gear system as used in other transmissions for ~~the~~ varying the efficiency range of the hydraulic torque converter without changing its size.

~~Hydraulic or~~ Electronic control devices and multi disc clutches are no longer ~~used~~ required.

As a result, the structure of the whole mechanism becomes the simplest, and the production cost the lower for this kind of transmission.

~~According to the appliance, a reverse drive mechanism must be added.~~

~~When applied for motorcycles only a simple shifting device is required for a neutral position and for a drive position. It only requires a coupling 17 for shifting the shaft 16.~~

~~The motorcycle device comprises:~~

~~A sliding coupling (17).~~

~~A turbine brake drum (6) is also required for shifting purposes taken into account that in spite of the engine rotation which may be under 500 rpm and the sliding produced is almost total, however the oil pressure produced inside the hydraulic converter makes no possibility for mechanical shifting.~~

When supplying for automobiles, a sifting device is required for providing a reverse, a neutral and drive positions.

The shifting selector applied to automobiles comprises:

A primary bevel gear (12), for transmitting a torque from the shaft (10) to the satellites (9).

If the body (14) is locked, the bevel gear (13) turn in opposite direction related to the engine rotation, then a reverse position is shifted, but if the sliding coupling is shifted with the body (14), the drive position is connected, and if the sliding coupling (15) is shifted with the body (14) which is unlocked, then a neutral position is obtained.

The sliding coupling and the bevel gear (13) are connected in a permanent way to the output shaft (16).

A brake (8) is required for stopping the turbine T only for shifting purposes, taken into account that in spite that engine rotation could be under 500 rpm, and the sliding between pump P and turbine T is the highest in such conditions, however the oil pressure inside said hydraulic converter makes no possible any mechanical shifting.